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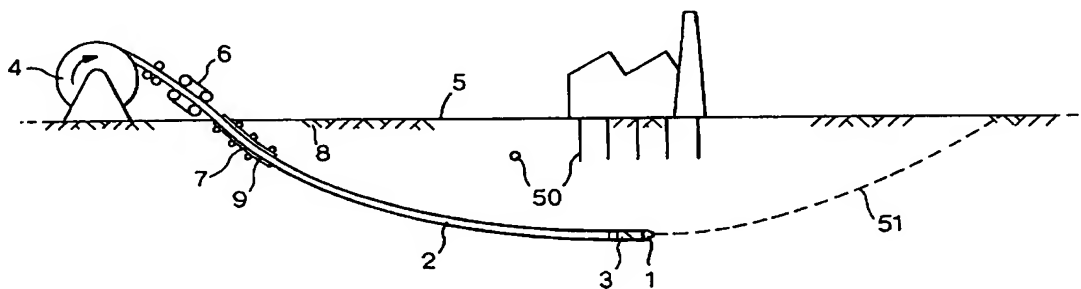
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(54) Title: STEERABLE SOIL PENETRATION SYSTEM



(57) Abstract: A steerable soil penetration system comprises a steerable penetration head, which compacts and does not cut away the surrounding soil and which is connected to an elongate flexible tubing such that the orientation of the penetration head can be varied relative to the tubing. The elongate tubing and/or a downhole hammer or tractor pushes the penetration head through the subsurface formation. Preferably the tubing is surrounded by a narrow annulus so that buckling of the tubing is inhibited and the tubing protects the pierced hole against caving in. Optionally the tubing is circumferentially expanded after completion of the piercing process thereby increasing the width of the pierced hole and providing a permanent hole lining.